

<110> Sakaki Yoshiyuki  
Tei, Hajime

<130> SPO-108

<141> 2000-03-10

<151> 1997-09-12

 $\langle 210 \rangle$  1

<211> 1290

<212> PRT

<213> Homo sapiens

<400> 1

Leu Lys Leu Arg Leu Pro Pro Glu Arg Arg Gly Lys Gly Arg Ser Gly  
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Ala	Asn	Gln	Glu	Tyr	Tyr	Gln	Gln	Trp	Ser	Leu	Glu	Glu	Gly	Glu	Pro	180	185	190
Cys	Ser	Met	Asp	Met	Ser	Thr	Tyr	Thr	Leu	Glu	Glu	Leu	Glu	His	Ile	195	200	205
Thr	Ser	Glu	Tyr	Thr	Leu	Gln	Asn	Gln	Asp	Thr	Phe	Ser	Val	Ala	Val	210	215	220
Ser	Phe	Leu	Thr	Gly	Arg	Ile	Val	Tyr	Ile	Ser	Glu	Gln	Ala	Ala	Val	225	230	235
Leu	Leu	Arg	Cys	Lys	Arg	Asp	Val	Phe	Arg	Gly	Thr	Arg	Phe	Ser	Glu	245	250	255
Leu	Leu	Ala	Pro	Gln	Asp	Val	Gly	Val	Phe	Tyr	Gly	Ser	Thr	Ala	Pro	260	265	270
Ser	Arg	Leu	Pro	Thr	Trp	Gly	Thr	Gly	Ala	Ser	Ala	Gly	Ser	Gly	Leu	275	280	285
Arg	Asp	Phe	Thr	Gln	Glu	Lys	Ser	Val	Phe	Cys	Arg	Ile	Arg	Gly	Gly	290	295	300
Pro	Asp	Arg	Asp	Pro	Gly	Pro	Arg	Tyr	Gln	Pro	Phe	Arg	Leu	Thr	Pro	305	310	315
Tyr	Val	Thr	Lys	Ile	Arg	Val	Ser	Asp	Gly	Ala	Pro	Ala	Gln	Pro	Cys	325	330	335
Cys	Leu	Leu	Ile	Ala	Glu	Arg	Ile	His	Ser	Gly	Tyr	Glu	Ala	Pro	Arg	340	345	350
Ile	Pro	Pro	Asp	Lys	Arg	Ile	Phe	Thr	Thr	Arg	His	Thr	Pro	Ser	Cys	355	360	365
Leu	Phe	Gln	Asp	Val	Asp	Glu	Arg	Ala	Ala	Pro	Leu	Leu	Gly	Tyr	Leu	370	375	380
Pro	Gln	Asp	Leu	Leu	Gly	Ala	Pro	Val	Leu	Leu	Phe	Leu	His	Pro	Glu	385	390	395
Asp	Arg	Pro	Leu	Met	Leu	Ala	Ile	His	Lys	Lys	Ile	Leu	Gln	Leu	Ala	405	410	415
Gly	Gln	Pro	Phe	Asp	His	Ser	Pro	Ile	Arg	Phe	Cys	Ala	Arg	Asn	Gly	420	425	430
Glu	Tyr	Val	Thr	Met	Asp	Thr	Ser	Trp	Ala	Gly	Phe	Val	His	Pro	Trp	435	440	445
Ser	Arg	Lys	Val	Ala	Phe	Val	Leu	Gly	Arg	His	Lys	Val	Arg	Thr	Ala	450	455	460

Pro Leu Asn Glu Asp Val Phe Thr Pro Pro Ala Pro Ser Pro Ala Pro  
 465 470 475 480  
 Ser Leu Asp Thr Asp Ile Gln Glu Leu Ser Glu Gln Ile His Arg Leu  
 485 490 495  
 Leu Leu Gln Pro Val His Ser Pro Ser Pro Thr Gly Leu Cys Gly Val  
 500 505 510  
 Gly Ala Val Thr Ser Pro Gly Pro Leu His Ser Pro Gly Ser Ser Ser  
 515 520 525  
 Asp Ser Asn Gly Gly Asp Ala Glu Gly Pro Gly Pro Pro Ala Pro Val  
 530 535 540  
 Thr Phe Gln Gln Ile Cys Lys Asp Val His Leu Val Lys His Gln Gly  
 545 550 555 560  
 Gln Gln Leu Phe Ile Glu Ser Arg Ala Arg Pro Gln Ser Arg Pro Arg  
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 Leu Pro Ala Thr Gly Thr Phe Lys Ala Lys Ala Leu Pro Cys Gln Ser  
 580 585 590  
 Pro Asp Pro Glu Leu Glu Ala Gly Ser Ala Pro Val Gln Ala Pro Leu  
 595 600 605  
 Ala Leu Val Pro Glu Glu Ala Glu Arg Lys Glu Ala Ser Ser Cys Ser  
 610 615 620  
 Tyr Gln Gln Ile Asn Cys Leu Asp Ser Ile Leu Arg Tyr Leu Glu Ser  
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 Cys Asn Leu Pro Ser Thr Thr Lys Arg Lys Cys Ala Ser Ser Ser Ser  
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 Tyr Thr Thr Ser Ser Ala Ser Asp Asp Asp Arg Gln Arg Thr Gly Pro  
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 Val Ser Val Gly Thr Lys Lys Asp Pro Pro Ser Ala Ala Leu Ser Gly  
 675 680 685  
 Glu Gly Ala Thr Pro Arg Lys Glu Pro Val Val Gly Gly Thr Leu Ser  
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 Gln Cys Ser Phe Ser Ser Thr Ile Val His Val Gly Asp Lys Lys Pro  
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 Pro Glu Ser Asp Ile Ile Met Met Glu Asp Leu Pro Gly Leu Ala Pro  
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 Gly Pro Ala Pro Ser Pro Ala Pro Ser Pro Thr Val Ala Pro Asp Pro  
 755 760 765

Ala Pro Asp Ala Tyr Arg Pro Val Gly Leu Thr Lys Ala Val Leu Ser  
 770 775 780  
 Leu His Thr Gln Lys Glu Glu Gln Ala Phe Leu Ser Arg Phe Arg Asp  
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 Arg Ala Glu Ala Pro Cys Tyr Val Ser His Pro Ser Pro Val Pro Pro  
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 Ser Thr Pro Trp Pro Thr Pro Pro Ala Thr Thr Pro Phe Pro Ala Val  
 865 870 875 880  
 Val Gln Pro Tyr Pro Leu Pro Val Phe Ser Pro Arg Gly Gly Pro Gln  
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 930 935 940  
 Gly Pro Pro Thr Pro Ala Ser His Ser Pro Ser Pro Ser Leu Pro Ala  
 945 950 955 960  
 Leu Pro Pro Ser Pro Pro His Arg Pro Asp Ser Pro Leu Phe Asn Ser  
 965 970 975  
 Arg Cys Ser Ser Pro Leu Gln Leu Asn Leu Leu Gln Leu Glu Glu Leu  
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 Pro Arg Ala Glu Gly Ala Ala Val Ala Gly Gly Pro Gly Ser Ser Ala  
 995 1000 1005  
 Gly Pro Pro Pro Pro Ser Ala Glu Ala Ala Glu Pro Glu Ala Arg Leu  
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 Ala Glu Val Thr Glu Ser Ser Asn Gln Asp Ala Leu Ser Gly Ser Ser  
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 Asp Leu Leu Glu Leu Leu Leu Gln Glu Asp Ser Arg Ser Gly Thr Gly  
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 Ser Ala Ala Ser Gly Ser Leu Gly Ser Gly Leu Gly Ser Gly Ser Gly  
 1060 1065 1070

Ser Gly Ser His Glu Gly Gly Ser Thr Ser Ala Ser Ile Thr Arg Ser  
 1075 1080 1085  
 Ser Gln Ser Ser His Thr Ser Lys Tyr Phe Gly Ser Ile Asp Ser Ser  
 1090 1095 1100  
 Glu Ala Glu Ala Gly Ala Ala Arg Gly Gly Ala Glu Pro Gly Asp Gln  
 1105 1110 1115 1120  
 Val Ile Lys Tyr Val Leu Gln Asp Pro Ile Trp Leu Leu Met Ala Asn  
 1125 1130 1135  
 Ala Asp Gln Arg Val Met Met Thr Tyr Gln Val Pro Ser Arg Asp Met  
 1140 1145 1150  
 Thr Ser Val Leu Lys Gln Asp Arg Glu Arg Leu Arg Ala Met Gln Lys  
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 Gln Gln Pro Arg Phe Ser Glu Asp Gln Arg Arg Glu Leu Gly Ala Val  
 1170 1175 1180  
 His Ser Trp Val Arg Lys Gly Gln Leu Pro Arg Ala Leu Asp Val Met  
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 Ala Cys Val Asp Cys Gly Ser Ser Thr Gln Asp Pro Gly His Pro Asp  
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 Asp Pro Leu Phe Ser Glu Leu Asp Gly Leu Gly Leu Glu Pro Met Glu  
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<210> 2

<211> 1291

<212> PRT

<213> Mus musculus

<400> 2

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 35 40 45  
 Ser Asn Gly Ser Ser Gly Asn Glu Ser Asn Gly Pro Glu Ser Arg Gly  
 50 55 60  
 Ala Ser Gln Arg Ser Ser His Ser Ser Ser Ser Gly Asn Gly Lys Asp  
 65 70 75 80  
 Ser Ala Leu Leu Glu Thr Thr Glu Ser Ser Lys Ser Thr Asn Ser Gln  
 85 90 95  
 Ser Pro Ser Pro Pro Ser Ser Ser Ile Ala Tyr Ser Leu Leu Ser Ala  
 100 105 110  
 Ser Ser Glu Gln Asp Asn Pro Ser Thr Ser Gly Cys Ser Ser Glu Gln  
 115 120 125  
 Ser Ala Arg Ala Arg Thr Gln Lys Glu Leu Met Thr Ala Leu Arg Glu  
 130 135 140  
 Leu Lys Leu Arg Leu Pro Pro Glu Arg Arg Gly Lys Gly Arg Ser Gly  
 145 150 155 160  
 Thr Leu Ala Thr Leu Gln Tyr Ala Leu Ala Cys Val Lys Gln Val Gln  
 165 170 175  
 Ala Asn Gln Glu Tyr Tyr Gln Gln Trp Ser Leu Glu Glu Gly Glu Pro  
 180 185 190  
 Cys Ala Met Asp Met Ser Thr Tyr Thr Leu Glu Glu Leu Glu His Ile  
 195 200 205  
 Thr Ser Glu Tyr Thr Leu Arg Asn Gln Asp Thr Phe Ser Val Ala Val  
 210 215 220  
 Ser Phe Leu Thr Gly Arg Ile Val Tyr Ile Ser Glu Gln Ala Gly Val  
 225 230 235 240  
 Leu Leu Arg Cys Lys Arg Asp Val Phe Arg Gly Ala Arg Phe Ser Glu  
 245 250 255  
 Leu Leu Ala Pro Gln Asp Val Gly Val Phe Tyr Gly Ser Thr Thr Pro  
 260 265 270  
 Ser Arg Leu Pro Thr Trp Gly Thr Gly Thr Ser Ala Gly Ser Gly Leu  
 275 280 285  
 Lys Asp Phe Thr Gln Glu Lys Ser Val Phe Cys Arg Ile Arg Gly Gly  
 290 295 300  
 Pro Asp Arg Asp Pro Gly Pro Arg Tyr Gln Pro Phe Arg Leu Thr Pro  
 305 310 315 320  
 Tyr Val Thr Lys Ile Arg Val Ser Asp Gly Ala Pro Ala Gln Pro Cys  
 325 330 335

Cys Leu Leu Ile Ala Glu Arg Ile His Ser Gly Tyr Glu Ala Pro Arg  
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 Ile Pro Pro Asp Lys Arg Ile Phe Thr Thr Arg His Thr Pro Ser Cys  
 355 360 365  
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 Pro Gln Asp Leu Leu Gly Ala Pro Val Leu Leu Phe Leu His Pro Glu  
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 Asp Arg Pro Leu Met Leu Ala Ile His Lys Lys Ile Leu Gln Leu Ala  
 405 410 415  
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 420 425 430  
 Glu Tyr Val Thr Met Asp Thr Ser Trp Ala Gly Phe Val His Pro Trp  
 435 440 445  
 Ser Arg Lys Val Ala Phe Val Leu Gly Arg His Lys Val Arg Thr Ala  
 450 455 460  
 Pro Leu Asn Glu Asp Val Phe Thr Pro Pro Ala Pro Ser Pro Ala Pro  
 465 470 475 480  
 Ser Leu Asp Ser Asp Ile Gln Glu Leu Ser Glu Gln Ile His Arg Leu  
 485 490 495  
 Leu Leu Gln Pro Val His Ser Ser Ser Pro Thr Gly Leu Cys Gly Val  
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 Gly Pro Leu Met Ser Pro Gly Pro Leu His Ser Pro Gly Ser Ser Ser  
 515 520 525  
 Asp Ser Asn Gly Gly Asp Ala Glu Gly Pro Gly Pro Pro Ala Pro Val  
 530 535 540  
 Thr Phe Gln Gln Ile Cys Lys Asp Val His Leu Val Lys His Gln Gly  
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 Gln Gln Leu Phe Ile Glu Ser Arg Ala Lys Pro Pro Pro Arg Pro Arg  
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 Leu Leu Ala Thr Gly Thr Phe Lys Ala Lys Val Leu Pro Cys Gln Ser  
 580 585 590  
 Pro Asn Pro Glu Leu Glu Val Ala Pro Val Pro Asp Gln Ala Ser Leu  
 595 600 605  
 Ala Leu Ala Pro Glu Glu Pro Glu Arg Lys Glu Thr Ser Gly Cys Ser  
 610 615 620  
 Tyr Gln Gln Ile Asn Cys Leu Asp Ser Ile Leu Arg Tyr Leu Glu Ser  
 625 630 635 640

Cys Asn Ile Pro Ser Thr Thr Lys Arg Lys Cys Ala Ser Ser Ser Ser  
 645 650 655  
 Tyr Thr Ala Ser Ser Ala Ser Asp Asp Asp Lys Gln Arg Ala Gly Pro  
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 675 680 685  
 Glu Gly Ala Thr Pro Arg Lys Glu Pro Val Val Gly Gly Thr Leu Ser  
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 Pro Leu Ala Leu Ala Asn Lys Ala Glu Ser Val Val Ser Val Thr Ser  
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 Gln Cys Ser Phe Ser Ser Thr Ile Val His Val Gly Asp Lys Lys Pro  
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 Pro Glu Ser Asp Ile Ile Met Met Glu Asp Leu Pro Gly Leu Ala Pro  
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 Gly Pro Ala Pro Ser Pro Ala Pro Ser Pro Thr Val Ala Pro Asp Pro  
 755 760 765  
 Thr Pro Asp Ala Tyr Arg Pro Val Gly Leu Thr Lys Ala Val Leu Ser  
 770 775 780  
 Leu His Thr Gln Lys Glu Glu Gln Ala Phe Leu Asn Arg Phe Arg Asp  
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 Leu Gly Arg Leu Arg Gly Leu Asp Thr Ser Ser Val Ala Pro Ser Ala  
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 Pro Gly Cys His His Gly Pro Ile Pro Pro Gly Arg Arg His His Cys  
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 Arg Ser Lys Ala Lys Arg Ser Arg His His His His Gln Thr Pro Arg  
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 Pro Glu Thr Pro Cys Tyr Val Ser His Pro Ser Pro Val Pro Ser Ser  
 850 855 860  
 Gly Pro Trp Pro Pro Pro Pro Ala Thr Thr Pro Phe Pro Ala Met Val  
 865 870 875 880  
 Gln Pro Tyr Pro Leu Pro Val Phe Ser Pro Arg Gly Gly Pro Gln Pro  
 885 890 895  
 Leu Pro Pro Ala Pro Thr Ser Val Ser Pro Ala Thr Phe Pro Ser Pro  
 900 905 910  
 Leu Val Thr Pro Met Val Ala Leu Val Leu Pro Asn Tyr Leu Phe Pro  
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 Thr Pro Pro Ser Tyr Pro Tyr Gly Val Ser Gln Ala Pro Val Glu Gly  
 930 935 940



Pro Pro Thr Pro Ala Ser His Ser Pro Ser Pro Ser Leu Pro Pro Pro  
 945 950 955 960  
 Pro Leu Ser Pro Pro His Arg Pro Asp Ser Pro Leu Phe Asn Ser Arg  
 965 970 975  
 Cys Ser Ser Pro Leu Gln Leu Asn Leu Leu Gln Leu Glu Glu Ser Pro  
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 Arg Thr Glu Gly Gly Ala Ala Ala Gly Gly Pro Gly Ser Ser Ala Gly  
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 Pro Leu Pro Pro Ser Glu Glu Thr Ala Glu Pro Glu Ala Arg Leu Val  
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 Glu Val Thr Glu Ser Ser Asn Gln Asp Ala Leu Ser Gly Ser Ser Asp  
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 Ala Ala Ser Gly Ser Leu Gly Ser Gly Leu Gly Ser Gly Ser Gly Ser  
 1060 1065 1070  
 Gly Ser His Glu Gly Gly Ser Thr Ser Ala Ser Ile Thr Arg Ser Ser  
 1075 1080 1085  
 Gln Ser Ser His Thr Ser Lys Tyr Phe Gly Ser Ile Asp Ser Ser Glu  
 1090 1095 1100  
 Ala Glu Ala Gly Ala Ala Arg Ala Arg Thr Glu Pro Gly Asp Gln Val  
 1105 1110 1115 1120  
 Ile Lys Cys Val Leu Gln Asp Pro Ile Trp Leu Leu Met Ala Asn Ala  
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 Asp Gln Arg Val Met Met Thr Tyr Gln Val Pro Ser Arg Asp Ala Ala  
 1140 1145 1150  
 Ser Val Leu Lys Gln Asp Arg Glu Arg Leu Arg Ala Met Gln Lys Gln  
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 Gln Pro Arg Phe Ser Glu Asp Gln Arg Arg Glu Leu Gly Ala Val His  
 1170 1175 1180  
 Ser Trp Val Arg Lys Gly Gln Leu Pro Arg Ala Leu Asp Val Met Ala  
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 Cys Val Asp Cys Gly Ser Ser Val Gln Asp Pro Gly His Ser Asp Asp  
 1205 1210 1215  
 Pro Leu Phe Ser Glu Leu Asp Gly Leu Gly Leu Glu Pro Met Glu Glu  
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 Gly Gly Gly Glu Gly Gly Gly Cys Gly Val Gly Gly Gly Gly Asp  
 1235 1240 1245

Gly Gly Glu Glu Ala Gln Thr Gln Ile Gly Ala Lys Gly Ser Ser Ser  
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Gln Asp Ser Ala Met Glu Glu Glu Glu Gln Gly Gly Gly Ser Ser Ser  
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Pro Ala Leu Pro Ala Glu Glu Asn Ser Thr Ser  
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<210> 3

<211> 3873

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

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ggg gaa tca ttt tgt cct ggg ggc gtc cca tcc cct ggg ccc cca cag 96  
 Gly Glu Ser Phe Cys Pro Gly Gly Val Pro Ser Pro Gly Pro Pro Gln  
 20 25 30

cac cgg cct tgc cca ggc ccc agc ctg gcc gat gac acc gat gcc aac 144  
 His Arg Pro Cys Pro Gly Pro Ser Leu Ala Asp Asp Thr Asp Ala Asn  
 35 40 45

agc aat ggt tca agt ggc aat gag tcc aac ggg cat gag tct aga ggc 192  
 Ser Asn Gly Ser Ser Gly Asn Glu Ser Asn Gly His Glu Ser Arg Gly  
 50 55 60

gca tct cag cgg agc tca cac agc tcc tcc tca ggc aac ggc aag gac 240  
 Ala Ser Gln Arg Ser Ser His Ser Ser Ser Ser Gly Asn Gly Lys Asp  
 65 70 75 80

tca gcc ctg ctg gag acc act gag agc agc aag agc aca aac tct cag 288  
 Ser Ala Leu Leu Glu Thr Thr Glu Ser Ser Lys Ser Thr Asn Ser Gln  
 85 90 95

agc cca tcc cca ccc agc agt tcc att gcc tac agc ctc ctg agt gcc 336  
 Ser Pro Ser Pro Pro Ser Ser Ser Ile Ala Tyr Ser Leu Leu Ser Ala  
 100 105 110

agc tca gag cag gac aac ccg tcc acc agt ggc tgc agc agt gaa cag 384  
 Ser Ser Glu Gln Asp Asn Pro Ser Thr Ser Gly Cys Ser Ser Glu Gln  
 115 120 125

tca gcc cgg gca agg act cag aag gaa ctc atg aca gca ctt cga gag 432  
 Ser Ala Arg Ala Arg Thr Gln Lys Glu Leu Met Thr Ala Leu Arg Glu  
 130 135 140

ctc aag ctt cga ctg ccg cca gag cgc cgg ggc aag ggc cgc tct ggg	480
Leu Lys Leu Arg Leu Pro Pro Glu Arg Arg Gly Lys Gly Arg Ser Gly	
145 150 155 160	
acc ctg gcc acg ctg cag tac gca ctg gcc tgt gtc aag cag gtg cag	528
Thr Leu Ala Thr Leu Gln Tyr Ala Leu Ala Cys Val Lys Gln Val Gln	
165 170 175	
gcc aac cag gaa tac tac cag cag tgg agc ctg gag gag ggc gag cct	576
Ala Asn Gln Glu Tyr Tyr Gln Gln Trp Ser Leu Glu Glu Gly Glu Pro	
180 185 190	
tgc tcc atg gac atg tcc acc tat acc ctg gag gag ctg gag cac atc	624
Cys Ser Met Asp Met Ser Thr Tyr Thr Leu Glu Glu Leu Glu His Ile	
195 200 205	
acg tct gag tac aca ctt cag aac cag gat acc ttc tca gtg gct gtc	672
Thr Ser Glu Tyr Thr Leu Gln Asn Gln Asp Thr Phe Ser Val Ala Val	
210 215 220	
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Ser Phe Leu Thr Gly Arg Ile Val Tyr Ile Ser Glu Gln Ala Ala Val	
225 230 235 240	
ctg ctg cgt tgc aag cgg gac gtg ttc cgg ggt acc cgc ttc tct gag	768
Leu Leu Arg Cys Lys Arg Asp Val Phe Arg Gly Thr Arg Phe Ser Glu	
245 250 255	
ctc ctg gct ccc cag gat gtg gga gtc ttc tat ggt tcc act gct cca	816
Leu Leu Ala Pro Gln Asp Val Gly Val Phe Tyr Gly Ser Thr Ala Pro	
260 265 270	
tct cgc ctg ccc acc tgg ggc aca ggg gcc tca gca ggt tca ggc ctc	864
Ser Arg Leu Pro Thr Trp Gly Thr Gly Ala Ser Ala Gly Ser Gly Leu	
275 280 285	
agg gac ttt acc cag gag aag tcc gtc ttc tgc cgt atc aga gga ggt	912
Arg Asp Phe Thr Gln Glu Lys Ser Val Phe Cys Arg Ile Arg Gly Gly	
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cct gac cgg gat cca ggg cct cgg tac cag cca ttc cgc cta acc ccg	960
Pro Asp Arg Asp Pro Gly Pro Arg Tyr Gln Pro Phe Arg Leu Thr Pro	
305 310 315 320	
tat gtg acc aag atc cgg gtc tca gat ggg gcc cct gca cag ccg tgc	1008
Tyr Val Thr Lys Ile Arg Val Ser Asp Gly Ala Pro Ala Gln Pro Cys	
325 330 335	
tgc ctg ctg att gca gag cgc atc cat tcg ggt tac gaa gct ccc cgg	1056
Cys Leu Leu Ile Ala Glu Arg Ile His Ser Gly Tyr Glu Ala Pro Arg	
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ata ccc cct gac aag agg att ttc act acg cgg cac aca ccc agc tgc	1104
Ile Pro Pro Asp Lys Arg Ile Phe Thr Thr Arg His Thr Pro Ser Cys	
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Leu Phe Gln Asp Val Asp Glu Arg Ala Ala Pro Leu Leu Gly Tyr Leu	
370 375 380	
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Pro Gln Asp Leu Leu Gly Ala Pro Val Leu Leu Phe Leu His Pro Glu	
385 390 395 400	
gac cga ccc ctc atg ctg gct atc cac aag aag att ctg cag ttg gcg	1248
Asp Arg Pro Leu Met Leu Ala Ile His Lys Lys Ile Leu Gln Leu Ala	
405 410 415	
ggc cag ccc ttt gac cac tcc cct atc cgc ttc tgt gcc cgc aac ggg	1296
Gly Gln Pro Phe Asp His Ser Pro Ile Arg Phe Cys Ala Arg Asn Gly	
420 425 430	
gag tat gtc acc atg gac acc agc tgg gct ggc ttt gtg cac ccc tgg	1344
Glu Tyr Val Thr Met Asp Thr Ser Trp Ala Gly Phe Val His Pro Trp	
435 440 445	
agc cgc aag gta gcc ttc gtg ttg ggc cgc cac aaa gta cgc acg gcc	1392
Ser Arg Lys Val Ala Phe Val Leu Gly Arg His Lys Val Arg Thr Ala	
450 455 460	
ccc ctg aat gag gac gtg ttc act ccc ccg gcc ccc agc cca gct ccc	1440
Pro Leu Asn Glu Asp Val Phe Thr Pro Pro Ala Pro Ser Pro Ala Pro	
465 470 475 480	
tcc ctg gac act gat atc cag gag ctg tca gag cag atc cac cgg ctg	1488
Ser Leu Asp Thr Asp Ile Gln Glu Leu Ser Glu Gln Ile His Arg Leu	
485 490 495	
ctg ctg cag ccc gtc cac agc ccc agc ccc acg gga ctc tgt gga gtc	1536
Leu Leu Gln Pro Val His Ser Pro Ser Pro Thr Gly Leu Cys Gly Val	
500 505 510	
ggc gcc gtg aca tcc cca ggc cct ctc cac agc cct ggg tcc tcc agt	1584
Gly Ala Val Thr Ser Pro Gly Pro Leu His Ser Pro Gly Ser Ser Ser	
515 520 525	
gat agc aac ggg ggt gat gca gag ggg cct ggg cct cct gcg cca gtg	1632
Asp Ser Asn Gly Gly Asp Ala Glu Gly Pro Gly Pro Pro Ala Pro Val	
530 535 540	
act ttc cag cag atc tgt aag gat gtg cat ctg gtg aag cac cag ggc	1680
Thr Phe Gln Gln Ile Cys Lys Asp Val His Leu Val Lys His Gln Gly	
545 550 555 560	
cag cag ctt ttt att gag tct cgg gcc cgg cct cag tcc cgg ccc cgc	1728
Gln Gln Leu Phe Ile Glu Ser Arg Ala Arg Pro Gln Ser Arg Pro Arg	
565 570 575	
ctc cct gct aca ggc acg ttc aag gcc aag gcc ctt ccc tgc caa tcc	1776
Leu Pro Ala Thr Gly Thr Phe Lys Ala Lys Ala Leu Pro Cys Gln Ser	
580 585 590	

cca gac cca gag ctg gag gcg ggt tct gct ccc gtc cag gcc cca cta	1824
Pro Asp Pro Glu Leu Glu Ala Gly Ser Ala Pro Val Gln Ala Pro Leu	
595 600 605	
gcc ttg gtc cct gag gag gcc gag agg aaa gaa gcc tcc agc tgc tcc	1872
Ala Leu Val Pro Glu Glu Ala Glu Arg Lys Glu Ala Ser Ser Cys Ser	
610 615 620	
tac cag cag atc aac tgc ctg gac agc atc ctc agg tac ctg gag agc	1920
Tyr Gln Gln Ile Asn Cys Leu Asp Ser Ile Leu Arg Tyr Leu Glu Ser	
625 630 635 640	
tgc aac ctc ccc agc acc act aag cgt aaa tgt gcc tcc tcc tcc tcc	1968
Cys Asn Leu Pro Ser Thr Thr Lys Arg Lys Cys Ala Ser Ser Ser Ser	
645 650 655	
tat acc acc tcc tca gcc tct gac gac gac agg cag agg aca ggt cca	2016
Tyr Thr Thr Ser Ser Ala Ser Asp Asp Asp Arg Gln Arg Thr Gly Pro	
660 665 670	
gtc tct gtg ggg acc aag aaa gat ccg ccg tca gca gcg ctg tct ggg	2064
Val Ser Val Gly Thr Lys Lys Asp Pro Pro Ser Ala Ala Leu Ser Gly	
675 680 685	
gag ggg gcc acc cca cgg aag gag cca gtg gtg gga ggc acc ctg agc	2112
Glu Gly Ala Thr Pro Arg Lys Glu Pro Val Val Gly Gly Thr Leu Ser	
690 695 700	
ccg ctc gcc ctg gcc aat aag gcg gag agt gtg gtg tcc gtc acc agt	2160
Pro Leu Ala Leu Ala Asn Lys Ala Glu Ser Val Val Ser Val Thr Ser	
705 710 715 720	
cag tgt agc ttc agc tcc acc atc gtc cat gtg gga gac aag aag ccc	2208
Gln Cys Ser Phe Ser Ser Thr Ile Val His Val Gly Asp Lys Lys Pro	
725 730 735	
ccg gag tcg gac atc atc atg atg gag gac ctg cct ggc cta gcc cca	2256
Pro Glu Ser Asp Ile Ile Met Met Glu Asp Leu Pro Gly Leu Ala Pro	
740 745 750	
ggc cca gcc ccc agc cca gcc ccc agc ccc aca gta gcc cct gac cca	2304
Gly Pro Ala Pro Ser Pro Ala Pro Ser Pro Thr Val Ala Pro Asp Pro	
755 760 765	
gcc cca gac gcc tac cgt cca gtg ggg ctg acc aag gcc gtg ctg tcc	2352
Ala Pro Asp Ala Tyr Arg Pro Val Gly Leu Thr Lys Ala Val Leu Ser	
770 775 780	
ctg cac aca cag aag gaa gag caa gcc ttc ctc agc cgc ttc cga gac	2400
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